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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,270	12/23/2003	Levinus Pieter Bakker	081468-0307112	4454
909	7590	10/13/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			NGUYEN, HUNG	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2851	

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/743,270	Applicant(s) BAKKER, LEVINUS PIETER	
	Examiner Hung Henry V. Nguyen	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-22,24 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 8,23 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/23/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9-22, 24, 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Silfvast et al (U.S.Pat. 6,232,613).

With respect to claims 1, 7, 19, 21-22, 27-29, Silfvast et al discloses a radiation system for use in a lithographic projection apparatus and corresponding method (see col.3, lines 1-4; lines 58-65) for the suppression of particle emission the generation of radiation and comprising all features of the instant claims: an electrode (10, 30) and voltage source (V) that applies an electric field between the radiation source and the electrode to generate a discharge between the radiation source and the electrode to capture contaminant particles from the radiation source. Although Silfvast et al does not specifically disclose the claimed radiation source, a support structure for supporting a patterning structure, a substrate support for supporting a substrate, and a projection system for projecting the patterned beam onto the substrate. Since the described above is used in an EUV lithography system, these features are inherent elements of the lithography apparatus and they must be present for the EUV lithography apparatus to function as intended.

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As to claim 2, Silfvast teaches that the electrode is positioned in the beam of radiation (see figure 1).

With respect to claims 3-4, Silfvast discloses a contaminant barrier (405) disposed downstream, relative to the direction of propagation of the beam of radiation of the radiation source (see figure 5).

Regarding claim 5-6, and 24, Silfvast teaches the electrode is a hollow cathode (see col.5, lines 65 thru col.6 line 3).

As to claims 10-13, Silfvast further discloses a gas provided in a region traversed by the beam of radiation and the gas comprises at least of one the extreme ultraviolet transparent gas such as He, Ar, Nitrogen and hydrogen (see col.6, lines30-35).

As to claims 15-18, Silfvast et al discloses the apparatus comprises a laser-produced, or discharge radiation source or radiation source comprises a wavelength of about 157 nm or about 126nm, or about 8nm to about 20nm or about 9nm to about 16nm (see claims 2-5 or Silfvast et al).

Allowable Subject Matter

3. The following is a statement of reasons for the indication of allowable subject matter: claims 8, 23 and 25 have been found to be allowable since the present application filed on December 23, 2003 (which is after November 29, 1999), Moors et al, which is assigned to the same Assignee (ASML), as the present invention, does not qualify as a reference against this application under 35 U.S.C. 103. Furthermore, with respect to claims 8, 23 and 25, applicant's remarks filed July 11, 2003 (see page 9) are found persuasive. Accordingly, the rejection of

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claims 8, 23 and 25 are withdrawn. Claims 8, 23 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Applicant's Amendment/Arguments

4. Applicant's amendment filed July 11, 2005 has been entered. Claim 25 has been amended. Turning to prior art rejection of claims 1-7, 9-24 and 26-29, Applicant's arguments have been carefully reviewed but they are not found persuasive. The applicant is reminded that the claimed subject matter to examination will be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not be read into the claims. In re Yamamoto, 740 F. 2d 1569, 1571, 222 USPO 934, 936 (Fed.Cir. 1984). With this in mind, the discussion herein will focus on how the terms and relationships thereof in the claims are met by the references. Response to any limitation that is not in the claims or any argument that is irrelevant to or does not relate to any specific claimed language will not be warranted.

Firstly, applicant argues that in Silfvast et al, the electrodes (110, 130) are part of the discharge source (100) and the electric field is generated within the discharge source while claim 1 recites a lithographic projection that includes, *inter alia*, a radiation source, an electrode, and a voltage source that applies an electric field between the radiation source and the electrode; the Examiner respectfully disagrees with the applicant. Silfvast et al meets all of the structures set forth in the claim, as broadly recited. Silfvast et al teaches "APEC geometry in producing EUV radiation with greatly reduced debris reaching regions beyond the lamp" (see col.5, line 15-16)

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and as can be seen in figures 2 and 3 of Silfvast, a discharge light source such as: EUV light, visible light, ultraviolet light, vacuum ultraviolet light, etc.. (see claims 1-6 of Silfvast) must be arranged before the electrode (130) and thus in the broadest sense, it is not an error in stating that an electric field (region E2) is generated between the electrode (130) and the radiation source.

Also, applicant argues that “no where does Silfvast et al disclose a lithographic projection apparatus”, Silfvast et al merely teaches a discharge source that may be used in a variety of applications including EUV lithography. The Examiner disagrees with the applicant, Silfvast meets the limitations as claimed. As clearly stated in the history prosecution of this case, since Silfvast clearly discloses that radiation system is for use in a lithography system, one having ordinary skill in the art would know that a lithography system must have at least a radiation system, a support structure for supporting a patterning device (mask or reticle), and a projection system for projecting the pattern formed the patterning device onto a substrate. These elements must be present for the lithography system to function, as intended.

It is noted that claims 28 and 29 recite a device made by the apparatus and the method of claim 1 and 21, respectively. It is conceivable that the device can be made by another apparatus/and method other than the apparatus and method of claims 1 and 18. Clearly, the device (for instance: the photosensitive substrate in this case) can made by another apparatus/method such as the apparatus/method of Silfvast et al. It has been noted that the patentability of a device /product does not depend on its method of production. Once a product appearing to be substantially identical is found and a 35 U.S.C. 102/103 rejection made, the burden shifts to the applicant to show an unobvious difference (see *In re Mareosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983)).

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5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V. Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hvn
10/2/05

A handwritten signature in black ink, appearing to read 'Henry Hung Nguyen', with a long horizontal flourish extending to the right.

HENRY HUNG NGUYEN
PRIMARY EXAMINER